

Source Water Assessment Program (SWAP) Report For The Flately Company



Prepared by the
Massachusetts Department of
Environmental Protection,
Bureau of Resource Protection,
Drinking Water Program

Date Prepared
March 21, 2001

Table 1: Public Water System (PWS) Information

<i>PWS NAME</i>	The Flately Company
<i>PWS Address</i>	580 Main Street
<i>City/Town</i>	Bolton
<i>PWS ID Number</i>	2034019
<i>Local Contact</i>	Chris Hannon
<i>Phone Number</i>	(978) 779-6071

<i>Well Name</i>	<i>Source ID#</i>	<i>Zone I (in feet)</i>	<i>IWPA (in feet)</i>	<i>Source Susceptibility</i>
Well #1	2034019-01G	252	628	Moderate
Well #2	2034019-02G	252	628	Moderate

What is SWAP?

The Source Water Assessment Program (SWAP) established under the federal Safe Drinking Water Act requires every state to:

- ? inventory land uses within the recharge areas of all public water supply sources;
- ? assess the susceptibility of drinking water sources to contamination from these land uses; and
- ? publicize the results to provide support for improved protection.

Maintaining Your Good Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

INTRODUCTION

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential contaminant sources, including septic systems, road maintenance, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential contaminant sources, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes:

1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Attachments, including a Map of the Protection Areas

1. DESCRIPTION OF THE WATER SYSTEM

The Wells

The two wells for the Flately Company, are located to the southwest portion of the site. Each well has a Zone I of 252 feet and an Interim Wellhead Protection Area (IWPA) of 628 feet. During drilling activities the geologic materials encountered were glacio-fluvial sands and gravels. Bedrock was encountered at 13 feet. Bedrock at the site consists of a blue gray gneiss of the Nashoba formation. The well is located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers that can prevent contaminant migration. Please refer to the attached map of the Zone I and IWPA.

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.

- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

The water from both sources is not treated at the time of this report. For current information on monitoring results and water quality information, please contact the Public Water System contact person listed above. For current information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1

2. DISCUSSION OF LAND USES IN THE PROTECTION AREAS

There are a number of land uses and activities within the drinking water supply protection areas that are potential sources of contamination

Key issues include:

1. **Parking Spaces in Zone I; and**
2. **Fertilizer Use in Zone I**

The overall ranking of susceptibility to contamination for the well is Moderate, based on the presence of at least one moderate threat land use or activity in the IWPA.

1. **Parking Spaces in Zone I** – Currently, the wells do meet DEP's restrictions for Zone I, which only allow water supply related activities in Zone I. Parking areas are potential sources of oil and other contamination from cars or trucks. Please note that systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying systems.
2. **Fertilizer Use in Zone I** – It is indicated that a private contractor takes care of the lawn and only applies a minimum amount of fertilizer on the lawn. The contractor should be instructed to not apply any fertilizers within the Zone I.

Table 2: Table of Activities within the Water Supply Protection Areas

Facility Type	Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Office Building	Parking lot and driveway	Both	Both	Moderate	Limit road salt usage and provide drainage away from wells
	Lawn care	Both	Both	Moderate	Fertilizer and pesticide use on the lawn

* -For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/dep/brp/dws/.

Glossary

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

IWPA: A 400 foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone II. To determine IWPA radius, refer to the attached map.

Zone II: The primary recharge area defined by a hydrogeologic study.

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

Implementing the following recommendations will reduce the system's susceptibility to contamination.

3. PROTECTION RECOMMENDATIONS

The Flatly Company should review and adopt the following recommendations:

Zone I:

- ✓ Keep non-water supply activities out of the Zone I.
- ✓ Remove all non-water supply activities from the Zone I to comply with DEP's Zone I requirements. Consider relocating the wells if Zone I threats cannot be mitigated. Please note that DEP permit approvals must be obtained prior to the installation of a new well.
- ✓ Conduct regular inspections of the Zone I. Look for illegal dumping and evidence of vandalism.
- 3 Do not use or store pesticides, fertilizers or road salt within Zone I.

Training and Education:

- ✓ Train staff on proper hazardous material transport, disposal, emergency response, and best management practices; include custodial staff, groundskeepers, and certified operator.
- ✓ Post drinking water protection area signs at key visibility locations.

Facilities Management:

- ✓ Implement Best Management Practices (BMPs) for the use of fertilizer, herbicides and pesticides on the property.
- ✓ The septic system components should be located, inspected, and maintained on a regular basis. Refer to the attachment for more information regarding septic systems.

Planning:

- ✓ Work with local officials in Bolton to include the Flatly Company wells' IWPA in Aquifer Protection District Bylaws and other regulations and to assist you in improving protection.
- ✓ Supplement the SWAP assessment with additional local information and incorporate it into water supply educational efforts. Use a potential contaminant threat inventory to assist in setting priorities, focusing inspection, and creating educational activities.

These recommendations are only part of your ongoing local drinking water source protection. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures.

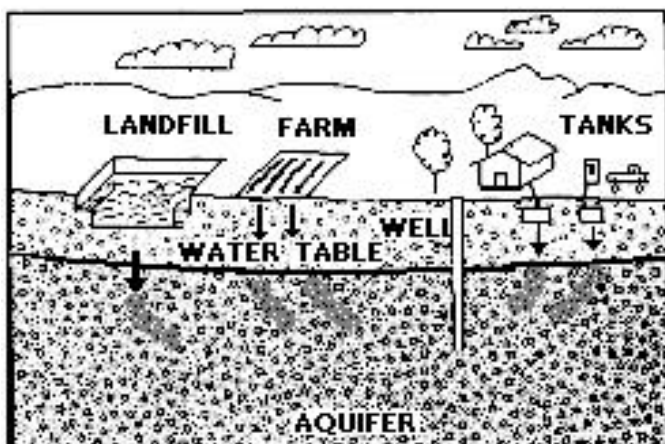


Figure 1: Example of how a well could become contaminated by different land uses and activities.

For More Information:

Contact Josephine Yemoh-Ndi in DEP's Worcester Office at (508) 792-7650 x 5030 for more information and for assistance in improving current protection measures.

More information relating to drinking water and source protection is available on DEP's web site at:
www.state.ma.us/dep/brp/dws.

Copies of this assessment have been provided to the water department, town boards, the town library and the local media.

4. ATTACHMENTS

- **Map of the Public Water Supply (PWS) Protection Area**
- **Recommended Source Protection Measures Factsheet**
- **Your Septic System Brochure**
- **Pesticide Use Factsheet**